

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A resin composition, which comprises:

a copolymer (A) comprising ethylene, as a major component, which is produced with a single-site catalyst, and an ethylene-vinyl alcohol copolymer (B) having an ethylene content of 20-60 mol.% and a degree of hydrolysis of 95% or above, said resin composition satisfying the equation (1):

$$1/99 \leq \{\text{weight of (A)}\} / \{\text{weight of (B)}\} \leq 99/1 \quad (1)$$

2. The resin composition as defined in Claim 1, wherein the copolymer (A) is an ethylene- α -olefin copolymer in which the α -olefin has 3-8 carbon atoms.

3. The resin composition as defined in Claim 1, wherein the copolymer (A) has a molecular weight distribution (Mw/Mn) of not greater than 4.

4. The resin composition as defined in Claim 1, wherein the ethylene-vinyl alcohol copolymer (B) contains a phosphorus compound in an amount of 2-200 ppm in terms of elemental phosphorus.

5. The resin composition as defined in Claim 1, wherein copolymer (A) has a melt flow rate (MFR) of 0.1-50 g/min.

6. The resin composition as defined in Claim 1, wherein the EVOH copolymer (B) has a melt flow rate (MFR) of 0.1-100 g/10 min

7. The resin composition as defined in Claim 1, wherein the copolymer (A) has a density of 0.90-0.94 g/cm³ and the resin composition further comprises a carboxylic acid-modified polyolefin (C) and satisfies the equations (2) and (3):

$$60/40 \leq \{\text{weight of (A)}\} / \{\text{weight of (B)}\} \leq 99/1 \quad (2)$$

$$0.1/99.9 \leq X \leq 20/80 \quad (3)$$

wherein $X = \{\text{weight of (C)}\} / \{\text{total weight of (A) and (B)}\}$.

8. The resin composition as defined in Claim 7, wherein the combination of ethylene-vinyl alcohol copolymer (B) and the carboxylic acid-modified polyolefin (C), in the form of resin particles having an average particle diameter not greater than 5 μm , is dispersed in a matrix of the copolymer (A).

9. The resin composition as defined in Claim 7, wherein the melt flow rate M_a of the copolymer (A) and the melt flow rate M_b of the ethylene-vinyl alcohol copolymer (B) satisfy the following equation (4):

$$0.05 \leq M_a/M_b \leq 5 \quad (4)$$

10. The resin composition as defined in Claim 7, which further comprises a hydrotalcite compound (D) in an amount of 0.0001-2% based on the total weight of (A) and (B).

11. The resin composition as defined in Claim 7, which further comprises a metal salt of higher aliphatic carboxylic acid (E) in an amount of 0.0001-2% based on the total weight of (A) and (B).

12. A multilayered structure, which comprises:

a layer of the resin composition as defined in Claim 7 and a layer of an ethylene-vinyl alcohol copolymer having an ethylene content of 20-60 mol.% and a degree of hydrolysis of at least 95%.

13. The multilayered structure as defined in Claim 12, which further comprises at least one layer comprising an ethylene- α -olefin copolymer produced with a single-site

catalyst and having a density of 0.90-0.94 g/cm³, in which the α -olefin has 3-8 carbon atoms, and at least one layer comprising a carboxylic acid-modified polyolefin.

14. The multilayered structure as defined in Claim 12, which is formed by coextrusion.

15. The resin composition as defined in Claim 1, wherein the copolymer (A) has a density of 0.85-0.90 g/cm³, and the resin composition satisfies the following equation (5):

$$1/99 \leq \{\text{weight of (A)}\}/\{\text{weight of (B)}\} \leq 40/60 \quad (5)$$

16. The resin composition as defined in Claim 15, wherein the melt flow rate Ma of the copolymer (A) and the melt flow rate Mb of the ethylene-vinyl alcohol copolymer (B) satisfy the following equation (6):

$$0.2 \leq Ma/Mb \leq 20 \quad (6)$$

17. The resin composition as defined in Claim 15, which further comprises a carboxylic acid-modified polyolefin (C) and satisfies the following equation (7):

$$0.1/99.9 \leq X \leq 20/80 \quad (7)$$

wherein $X = \{\text{weight of (C)}\}/\{\text{total weight of (A) and (B)}\}$.

18. A multilayered structure, which comprises:

a layer of the resin composition as defined in Claim 15, a layer of adhesive resin, and a layer of polyolefin.

19. The multilayered structure as defined in Claim 12, wherein the EVOH layer has a thickness of 5-100 μm .

